

REMARKS/ARGUMENTS

Status of the Application and claims

Claims 2-9 and 11-12 are pending in the application.

Claims 2 , 4-9 and 11-12 are currently amended.

Claims 1 and 10 have been canceled.

Claims 1-4 were rejected under 35 U.S.C. § 112.

Claims 5-12 were objected to under 37 C.F.R. § 1.75(c).

Claims 1-4 were rejected under 35 U.S.C. § 103.

Claims 1-4 were provisionally rejected on the ground of a non-statutory double patenting rejection.

Claim 2 was amended to clarify that the base coat layer has a UV transmission of less than 0.1% in the wavelength range from 290 to 380 nm and of less than 0.5% in the wavelength range from 380 to 400 nm. Support for the amendment is in the specification on page 15, lines 12-14.

Rejections under 35 U.S.C. § 112

Claims 1-4 were rejected under 35 U.S.C. § 112 second paragraph as being indefinite for failing to particularly point out and distinctly claim the invention. The term "light" was held not to be definite. Claim 1 has been deleted thereby obviating the rejection. Claims 2-4 have been amended to delete the term "light". The brightness description in the claims wherein the brightness L* has a value of at least 80 units and contains aluminum pigments shows that the multilayer coating in fact is light in color and no further description is required. In view of the amendments to the claims, this rejection should be withdrawn.

Objection under 37 C.F.R. § 1.75(c)

Claims 5-12 were rejected under 37 C.F.R. § 1.75(c) for being in improper form because a multiple dependent claim may not depend from another multiple dependent claim. Claims 5-9 and 11-12 have been amended and are not now multiple dependent claims. Claim 10 has been deleted thereby obviating this objection. In view of the amendments to the claims this objection should be withdrawn.

Non-statutory Double Patenting Rejection.

Claims 1-4 were rejected on the basis of a non-statutory double patent in view of Se. No. 10/950,616 filed September 27, 2004. In view of the above amendments to claims 5-9 and 11-12, it is expected that these claims would also be included in this double patenting rejection. A terminal disclaimer wherein the term of any patent issuing on the subject application will not extend beyond the term of Se. No. 10/950,616 has been submitted herewith thereby obviating this rejection.

Rejections Under 35 U.S.C. § 103(a)

In regard to paragraph 6 of the office action, the subject matter of the various claims was commonly owned at the time the inventions were made and there are no obligations under 37 CFR 1.56.

Claims 1-4 were rejected under 35 U.S.C. § 103(a) as being obvious over Schlaak (U.S. Patent No. 5,976,343), *hereinafter* "Schlaak" in view of Kiehl *et al.* (Prog. Org. Coat. 37:179-83 (1999)), *hereinafter* "Kiehl" and Falcoff *et al.* (U.S. Patent No. 4,403,866), *hereinafter* "Falcoff". Since claims 5-9 and 11-12 have been amended and place in proper dependent form, these claims are also under consideration. Applicants respectfully traverse the above rejection.

As explained in Applicants' specification at page 2, lines 7-29, known coating compositions, including those in the primary reference, Schlaak, have a weakness in that

the production of multi-layer coatings in light metallic color shades, in particular silver color shades, is not readily possible. The reason is UV light (UV radiation), as a constituent of natural daylight, passes through the coating layers applied to the EDC [electrodeposition coating] primer to the surface of the EDC primer to a noticeable extent in the absence of a primer surfacer layer and causes degradation of the EDC primer The possible undesired long-term consequences of an inadmissible level of UV light penetration to the EDC layer are chalking of the EDC layer and delamination of the multi-layer coating over the service life of the coated substrates.

UV absorbers are one solution to the problem, but UV absorbers are not very useful in base coat layers and/or clear coat layers (see page 2, line 30 – page 3, line 3). Applicants' claimed invention, however, solves the problem without the use of UV absorbers through Applicants' novel and nonobvious *combination* of (1) a solids

content of 15 to 30 wt.% together with (2) a pigment content to resin solids content weight ratio of 0.3:1 to 0.45:1 together with (3) the fact that the pigment content consists of 90 to 100% by weight of at least one non-leafing aluminum pigment together with (4) the fact that the aluminum pigment is passivated by chromating, coated with a silicon-oxygen network, or a combination thereof. Elements 1-3 must be present in order to obtain the acceptable, and now claimed, UV transmission, and element 4 is needed in order to maintain acceptable technological properties.

Applicants have solved a problem of degradation by UV light that has vexed light colored multilayer coatings wherein the base coat layer contains metallic pigments, in particular aluminum pigments. Schlaak does not recognize that such a problem even exists. Therefore, one skilled in the art would not even look to Schlaak to solve this problem let alone modify Schlaak as suggested by the Examiner to include the various parameters of Applicants' amended claims to arrive at the invention as set forth in the amended claims. Without Applicants' specification being used as a roadmap, one could not arrive at the claimed invention which is the obvious impermissible use of hindsight. "[O]nly knowledge which was within the level of ordinary skill in the art at the time the claimed invention was made and does not include knowledge gleaned only from applicant's disclosure...is proper" (MPEP 2145 X.A). In the present case, the knowledge was gleaned from Applicants' disclosure and therefore constitutes "impermissible hindsight".

The base coats produced by Applicants' claimed process do have a usual solids content of 15 to 30 wt.%. The ratio by weight of pigment content to resin solids content of 0.3:1 to 0.45:1 is also known for waterborne base coats, but this ratio is unusually high for waterborne metallic base coats with a *light metallic color shade*. Pigment content is 90 to 100% by weight of aluminum pigment, which lies in the nature of light metallic color shades. The resulting claimed range of aluminum pigment in the coating composition is thus an unusually high calculated as 3.1% to 9.3%. The reason for using such a large proportion of aluminum pigments in the base coat is to allow for reduction of UV transmission to the EDC primer layer.

However, It is not possible to use such a large proportion of aluminum pigments necessary for effective UV transmission reduction if the wrong aluminum pigments are selected. If unclaimed aluminum pigments are selected, the coating

loses the necessary technological properties. This effect is demonstrated in Table 3 of Example 6 (specification pages 26-27). The experiments therein are well suited to demonstrate the effect of the invention by variation of key parameters. Additional data should not be necessary. For example, any coating containing below the claimed lower limit of aluminum pigment, that is 90%, would result in a coating outside of the light metallic color shades, which in effect would not be a true comparison coating. Coatings having a pigment content to solids content weight ratio below 0.03:1 would not have the required UV transmission reduction.

The effectiveness of Applicants' claimed invention is also demonstrated in Example 5 at page 25, line 14 – page 26, Table 2. In Example 5, the comparison coating of Example 1 has a UV transmission at 290 to 380 nm of between 0 and 0.6% and a UV transmission at 380 to 400 nm of between 0.6 to 0.7%. Amended claim 2 now requires that a UV transmission of less than 0.1% in the wavelength range from 290 to 380 nm and of less than 0.5% in the wavelength range from 380 to 400 nm. Thus, Example 1 comparison coatings have an *unacceptable* UV transmission as measured by industry specifications (see page 2, lines 21-25) and required by claim 2 and the claims dependent thereon. Contrarily, coatings from Examples 2-4, produced via a process of the invention, all have UV transmission at 290 to 380 nm of between 0 and 0.09% and at 380 to 400 nm of between 0.09% to 0.4%, placing all of these coating within the claimed UV transmission ranges.

Schlaak does not disclose waterborne basecoats similar or identical to those used as unmodified waterborne basecoats in Applicants' claim 2 process as amended. Not only is Schlaak silent as to the specific type of aluminum pigments and the proportion of the aluminum pigments, it also does not disclose the combination of aluminum pigments with (1) the solids content, (2) the ratio by weight of pigment content to resins solids content, and (3) the composition of the pigment content as required by Applicants' claim 2 process. Only when these three requirements of Applicants' claim 2 process are met *in combination* is it possible to have a low UV transmission when producing multilayer coatings in light metallic color shades, and only then do these multilayer coatings have the required technological properties. Schlaak, alone or in combination with Kiehl and Falcoff, fails to suggest the desirability of Applicants' claimed combination. See MPEP § 2143.01(III) ("The

mere fact that references *can* be combined or modified does not render the resultant combination obvious unless the result would have been predictable to one of ordinary skill in the art.”) (emphasis in original).

Kiehl is directed to encapsulated aluminum pigments that are encapsulated or treated with a variety of inhibitors including phosphates (see p. 179, par. 2.1). Applicants’ invention is directed toward only chromated and silicon-oxygen network coated aluminum flake pigments. Further, Table 3, page 28, of the specification shows that phosphated aluminum flake pigments do not give the desired properties. Certainly, there is no teaching or suggestion in Kiehl that treated aluminum flake pigments can be used in a base layer to reduce UV transmission in the amounts and wave lengths set forth in the claims to protect an ECD primer from UV degradation as set forth in the amended process claims. Kiehl has absolutely no bearing on Applicants claimed process but is merely an article directed toward treated or encapsulated aluminum pigments.

Falcoff is directed to an apparatus and process for the manufacture of paints or coating compositions of a wide variety of colors and the colors are measured by brightness and other typical color measurement parameters and has absolutely nothing to do with Applicants’ claimed process for the protection of an ECD primer from UV degradation by the application of a base layer containing passivated aluminum flake pigment that eliminate or significantly decrease UV transmission in given wavelengths. Again, Falcoff has absolutely no bearing on Applicants process but is directed to the manufacture of paints of different colors.

Because claims 3-9, 11 and 12 are dependent claims, which recite even further limitations to claim 2 that has already been traversed, Applicants rely upon the arguments presented above in rebuttal to the Examiner’s assertion that claims 3-9, 11 and 12, are obvious over Schlaak in view of Kiehl and Falcoff .


Summary

In view of the foregoing amendments and remarks, Applicants submit that this application is in condition for allowance. In order to expedite disposition of this case, the Examiner is invited to contact Applicants’ representative at the telephone number below to resolve any remaining issues. Should there be any additional fee due

Serial No. 10/575,322
Docket No. FA1225 US PCT

which is not accounted for, please charge such fee to Deposit Account No. 04-1928
(E.I. du Pont de Nemours and Company).

Respectfully submitted,

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Dated: March 3, 2009